

**IN THE DRAWINGS:**

The attached Replacement Sheet includes changes to Figure 2. In Figure 2, the designations for the resonant loads 260, 261, 262 and 263 have been changed to 261, 262, 263 and 264. Please use the Replacement Sheet to replace existing Figure 2.

Attachment: Replacement Sheet

**REMARKS/ARGUMENTS**

The Applicants originally submitted Claims 1-21 in the application. In the present response, the Applicants have amended Claim 14 to correct an antecedent problem. The Applicants have not amended, canceled or added any other claims. Accordingly, Claims 1-21 are currently pending in the application.

**I. Formal Matters and Objections**

The Examiner has objected to the drawings for failing to include the reference sign "264." In response, the Applicants submit a Replacement Sheet including changes to Figure 2 wherein the reference sign 264 has been added and the reference sign 260 has been removed. Accordingly, the Applicants respectfully request the Examiner to withdraw the objection of the drawings.

**II. Rejection of Claim 14 under 35 U.S.C. §112**

The Examiner has rejected Claim 14 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. In response, the Applicants have amended Claim 14 to provide the correct antecedent basis. Accordingly, the Applicants respectfully request the Examiner to withdraw the §112, second paragraph rejection and allow issuance of Claim 14.

**III. Rejection of Claims 1-21 under 35 U.S.C. §103**

The Examiner has rejected Claims 1-21 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,884,154 to Sano, *et al.* The Applicants respectfully disagree since Sano does not

teach or suggest each element of independent Claims 1, 8 and 15. More specifically, Sano does not teach or suggest an inductor, coupled between a common source of a plurality of transistors and a current generator, configured to resonate proportionally to a frequency of signals received by the plurality of transistors with a first capacitance associated with the plurality of transistors.

Sano relates to mixer circuits and using degenerative inductors in conjunction with input transistors to maintain linearity of the circuit while reducing problems due to low voltage and thermal noise. (*See column 1, lines 6-16.*) Sano discloses a mixer having a plurality of transistors (Q1-Q6) and inductors 15, 19. Inductor 15 is connected to a source 17 of input transistor Q5 and inductor 17 is connected to a source 21 of input transistor Q6. (*See column 3, line 24 to column 4, line 5, and Figure 1.*)

As recognized by the Examiner, Sano does not teach a single inductor but the Examiner asserts that it would be obvious to replace the two inductors 15, 19, with a single inductor. (*See Examiner's Action, pages 3-4.*) Even if this is obvious, Sano still does not teach or suggest coupling a single inductor between a common source of a plurality of transistors and a current generator. On the contrary, Sano does not even disclose a common source for the transistors Q1-Q6. (*See Figure 1.*) In fact, Sano specifically denotes different sources, source 17 and source 21, for transistors Q5 and Q6. (*See column 4, lines 1-3 and Figure 1.*)

Additionally, the Applicants do not find any teaching or suggestion in Sano of either inductor 15 or 19 configured to resonate proportionally to a frequency of the signals V1 or V2 received by the transistors Q1-Q6 with a first capacitance associated therewith. Instead, Sano discloses that the inductors 15 and 19 are used to replace resistors as feedback elements in conventional mixers to operate as feedback impedances to enhance the linearity of the mixer. (See column 4, lines 3-12.) The Applicants fail to see where Sano teaches or suggest an inductor configured to resonate with a capacitance associated with the transistors Q1-Q6. Accordingly, even if it is obvious that there is a capacitance associated with the transistors Q1-Q6 as asserted by the Examiner, Sano fails to teach or suggest inductors configured to resonate to a frequency of signals received by the transistors Q1-Q6 with a first capacitance associated with the transistors Q1-Q6.

Thus, for at least the reasons argued above, Sano fails to teach or suggest each element of independent Claims 1, 8 and 15 and Claims dependent thereon. As such, Sano fails to provide a *prima facie* case of obviousness of Claims 1-21 and, therefore, does not render Claims 1-21 obvious. Accordingly, the Applicants respectfully request the Examiner to withdraw the §103(a) rejection of Claims 1-21 and allow issuance thereof.

#### **IV. Comment on Cited References**

The Applicants reserve further review of the references cited but not applied if applied in the future.

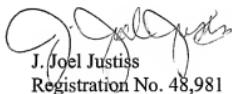
**V. Conclusion**

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-21.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

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